

**REMARKS**

The Office Action rejects claims 36, 39, 40, and 42 under 35 U.S.C. § 103(a) as being unpatentable over Naka (JP 2001-163631) and Unterberger (EP 0769687). The Office Action also rejects claim 38 under 35 U.S.C. § 103(a) as being unpatentable over Naka and Unterberger in combination with Arao (U.S. Patent No. 4,453,170). Additionally, the Office Action also rejects claim 37 under 35 U.S.C. § 103(a) as being unpatentable over Naka and Unterberger in combination with Lyle (U.S. Patent No. 4,293,231).

In order to analyze Naka and Unterberger, Applicants' representative relied on the machine translations of these references provided with the Office Action. All citations for these publications refer to these machine translations.

By this Reply, Applicants have amended independent claim 36 to recite "calculating the weight of the preform based on the detected frequency of oscillation." Likewise, Applicants have amended independent claim 42 to recite "calculating the weight of the preform based on the detected frequency of oscillation." Additionally, Applicants have cancelled claims 22-35 and 41. Applicants respectfully submit that the originally filed application and drawings fully support the claim amendments. No new matter has been added. Claims 36-40 and 42 are currently pending in this application.

**Rejection of Claims 36, 39, 40, and 42 under 35 U.S.C. § 103(a)**

Regarding the rejection of claims 36, 39, 40, and 42 under 35 U.S.C. § 103(a), Applicants respectfully submit that the Office Action does not establish a *prima facie* case of obviousness. A proper obviousness rejection must address every claim feature. M.P.E.P. § 2143.03. Additionally, a reference that teaches away from a claimed

combination generally cannot support a *prima facie* case of obviousness of that claimed combination. McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1354 (Fed. Cir. 2001), citing In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994). A reference teaches away from a claimed invention if reading the reference would discourage a person of ordinary skill in the art from implementing the claimed invention. Tec Air, Inc. v. Denso Mfg. Michigan Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999), citing In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994). Furthermore, a *prima facie* case of obviousness cannot rest on a suggestion to modify a cited reference's disclosure in a manner that would render it unsatisfactory for its intended purpose. See M.P.E.P. § 2143.01(V).

The disclosure of the present application relates to a method and apparatus for measuring the weight of a preform during a deposition phase to allow monitoring the weight of the preform as it grows. A method according to any of claims 36, 39, and 40 includes, *inter alia*, "elastically constraining an elongated element comprising a chemical deposition substrate to a chemical deposition machine for the formation of the preform," "inducing an oscillation of said elongated element," and "detecting the frequency of oscillation of said elongated element" (emphasis added). With the elongated element elastically constrained, the detected frequency of oscillation may depend on the mass of the preform. Given this, a method according to any of claims 36, 39, and 40 also includes, "calculating the weight of the preform based on the detected frequency of oscillation" (emphasis added). A method according to claim 42 includes similar features.

Applicants respectfully submit that Naka discusses technology wholly unrelated to Applicants' claimed invention. Naka relates to a method and apparatus for controlling

the geometric quality of an optical fiber during drawing. Machine Translation of Naka at ¶¶ 0001-0005. During drawing, the geometric characteristics of a fiber are noticeably affected by the position of the lower portion of the preform from which the optical fiber grows, making it desirable to maintain correct and stable positioning of the preform. See Id. In view of this, Naka discloses a system for avoiding vibration and incorrect positioning of the preform by detecting such problems and rectifying them. Id. at ¶¶ 0004-0010.

With its disclosure focused on unrelated technology, Naka fails to teach or suggest a number of the features of Applicants' claimed invention, teaching away from at least some of the features of the claimed invention. For example, Naka discloses detecting "the weight of the optical fiber perform 1" with strain gauges 10A-10D, not "calculating the weight of the preform based on the detected frequency of oscillation." Furthermore, Naka's primary purpose is eliminating oscillation, not "inducing an oscillation." Id. at ¶¶ 0005 and 0010. Naka bemoans that oscillation causes a poor quality finished optical fiber. Id. at ¶ 0010.

This would discourage a person of ordinary skill in the art from modifying Naka's system to involve "inducing an oscillation of said elongated element . . . and calculating the weight of the preform based on the detected frequency of oscillation." Thus, Naka teaches away from the Office Action's suggestion to modify Naka to include these claimed features. Indeed, modifying Naka's system to include these features would render it unsatisfactory for its intended purpose of eliminating oscillation.

Furthermore, even if the Office Action had a tenable argument that Naka could support a *prima facie* case of obviousness (which it cannot for the foregoing reasons),

Unterberger also discloses technology unrelated to the claims of the present application. Unterberger discloses a method of vibrating and elastically deforming a fiber or thread (similar to vibrating the strings of a violin) to determine the resonant frequency and the mass per unit length of the fiber or thread. Machine Translation of Unterberger at pp. 1-2. Thus, Unterberger fails to disclose anything remotely related to making a preform for optical fibres.

For at least these reasons, Applicants respectfully submit that the Office Action does not establish a *prima facie* case of obviousness of claims 36, 39, 40, and 42. Accordingly, Applicant respectfully requests withdrawal of the rejection of these claims under 35 U.S.C. § 103(a).

**Rejections of Claims 37 and 38 under 35 U.S.C. § 103(a)**

Regarding the rejections of claims 37 and 38 under 35 U.S.C. § 103(a), Applicants respectfully submit that the Office Action's citations of Arao and Lyle do not cure the above-discussed deficiencies of the rejection of claims 36, 39, 40, and 42. Thus, Applicants respectfully submit that the Office Action does not establish a *prima facie* case of obviousness of claims 37 and 38. Accordingly, Applicants respectfully request withdrawal of the rejection of these claims under 35 U.S.C. § 103(a).

**Conclusion**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

The Office Action contains characterizations of the claims and the related art with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

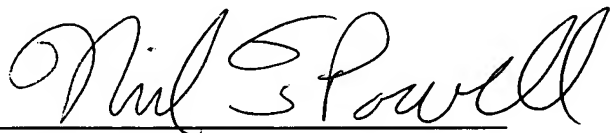
Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

If the Examiner believes a telephone conversation might advance prosecution, the Examiner is invited to call Applicants' undersigned agent at 202-408-4492.

Respectfully submitted,

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